

THE CLAIMS

1. A system for detecting signals including a signal detector comprising:
 - a receiver for receiving at least a first segment of a signal and a second segment of the signal, the first and second segments of the signal representing separate periods of time, wherein the signal comprises a signal of interest perturbed by noise or pseudo-noise;
 - 5 a correlator coupled to the receiver for deriving first correlation data, representative of the correlation between the first segment and a hypothesis, and second correlation data representative of the correlation between the second segment and the hypothesis; and
 - 10 a combiner coupled to the correlator for determining a parameter difference between the first and second correlation data, for adjusting a selected one of the first and second correlation data responsive to the parameter difference, and combining the adjusted data with the other of the first and second correlation data to obtain cumulative correlation data useful for detecting at least a parameter of the signal of interest.
- 15 2. The signal detector of claim 1 in which the receiver is an RF receiver.
3. The signal detector of claim 1 in which the signal of interest is a carrier signal modulated with a repeating PN code.
4. The signal detector of claim 1 in which the correlator is a matched filter.
- 20 5. The signal detector of claim 1 in which the combiner is a processor.
6. The signal detector of claim 1 in which the parameter difference is a code phase difference, and the combiner is configured to adjust the selected one of the first and second correlation data responsive to the code phase difference.

7. The signal detector of claim 1 in which the combiner is configured to successively combine the correlation data for successive segments until the signal of interest or a parameter of the signal of interest can be accurately and reliably detected.
8. The signal detector of claim 7 in which the parameter of the signal of interest is the code phase of the signal.
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9. The signal detector of claim 7 in which the parameter of the signal of interest is the presence of the signal.